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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,548	12/05/2003	Kazumi Naito	Q78483	8003

23373 7590 02/27/2006  
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EXAMINER

MAI, NGOCLAN THI

ART UNIT PAPER NUMBER

1742

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/727,548

Applicant(s)

NAITO ET AL.

Examiner

Ngoclan T. Mai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12/02/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 13, 14 and 16-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13, 14 and 16-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claim 13 is rejected under 35 U.S.C. 102(e) as being anticipated by Habecker et al. (U.S. Patent No. 6,402,066, now "Habecker '066").

Habecker '066 discloses a niobium powder having significant oxygen content wherein the powder can agglomerated, col. 4, lines 57-58 and 63. Habecker '066 teaches the powder can have oxygen content of from about 2000 ppm (0.2 wt%) to 60,000 ppm (6.0 wt%), col. 10, lines 1-3. Habecker '066 particularly discloses niobium powder having oxygen content of 36,840 ppm or 3.68 wt%. The powder can be formed into a sintered body for capacitor anode, col. 3, lines 46-50. Habecker '066 therefore teaches the method of making capacitor employing the sintered body as claimed.

3. Claims 14, 16-18, 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Habecker '066.

Habecker '066 discloses a niobium powder having significant oxygen content wherein the powder can agglomerated, col. 4, lines 57-58 and 63. Habecker '066 teaches the powder can have oxygen content of from about 2000 ppm (0.2 wt%) to 60,000 ppm (6.0 wt%), col. 10, lines 1-3. Habecker '066 particularly discloses niobium powder having oxygen content of 36,840 ppm or 3.68 wt%.

The difference between the claims and Habecker '066 is that Habecker '066 does not teach the average particle size of the granulated powder.

Habecker '066 however discloses the niobium powder obtained by crushing an ingot, impact milling and classifying to 5 by 80 microns in an air classifier. In col. 8, lines 41-48 Habecker '066 teaches after milling the powder is then subjected to a heat treatment at any temperature sufficient to generally cause agglomeration. Note that agglomerated powder is corresponded to applicant's granulated powder. The niobium powder having the size as above after thermal treatment would be expected to have

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agglomerated size encompassed the claimed granulated powder size. Furthermore, the difference in size will not support the patentability of the subject matter encompassed by the prior art unless there is evidence indicating such size range is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable range by routine experimentation." See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955); *In re Hoeschele*, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969); *Merck & Co. Inc. v. Biocraft Laboratories Inc.*, 874 F.2d 804, 10 USPQ2d (Fed.cir), cert. denied, 493 U.S. 975 (1989); *In re Kulling*, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990); and *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997). Where patentability is said to be based upon particular chosen dimensions or upon another variable recited in the claim, the applicant must show that the chosen dimensions are critical. *In re Woodruff*, 919 F.2d, 1575, 16 USPQ2d, 1934 (Fed. Cir. 1990).

As for claims 16 and 21, Habecker '066 discloses the niobium powder having surface area from 1 to 4.5 m<sup>2</sup>/g, col. 3, lines 36-44, col. 4, line 50. As for claims 17-18 Habecker '066 teaches the powder can be doped with nitrogen, col. 10, lines 14-17. As for claim 20, Habecker '066 teaches a sintered body formed from the powder above, col. 3, lines 46-50. As for claims 23-24, Habecker '066 teaches the dielectric material of niobium pentoxide, see col. 11, lines 27-30 and that it formed by electrolytic oxidation, col. 14, lines 6-9. As for claim 29, Habecker '066 discloses the claimed limitation in col. 12, line 66 to col. 13, line 1. As for claim 28, Habecker '066 teaches the capacitor can be used in automotive electronics, col. 11, lines 38-44.

4. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Habecker '066.

The difference between the claim and Habecker '066 is that Habecker '066 does not specifically teach the size of the granulated powder.

Habecker '066 however discloses the niobium powder obtained by crushing an ingot, impact milling and classifying to 5 by 80 microns in an air classifier. In col. 8, lines 41-48 Habecker '066 teaches after milling the powder is then subjected to a heat treatment at any temperature sufficient to

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generally cause agglomeration. Note that agglomerated powder is corresponded to applicant's granulated powder. The niobium powder having the size as above after thermal treatment would be expected to have agglomerated size encompassed the claimed granulated powder size. Furthermore, the difference in size will not support the patentability of the subject matter encompassed by the prior art unless there is evidence indicating such size range is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable range by routine experimentation." See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955); *In re Hoeschele*, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969); *Merck & Co. Inc. v. Biocraft Laboratories Inc.*, 874 F.2d 804, 10 USPQ2d (Fed.cir), cert. denied, 493 U.S. 975 (1989); *In re Kulling*, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990); and *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997). Where patentability is said to be based upon particular chosen dimensions or upon another variable recited in the claim, the applicant must show that the chosen dimensions are critical. *In re Woodruff*, 919 F.2d, 1575, 16 USPQ2d, 1934 (Fed. Cir. 1990).

5. Claims 19 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Habecker '066 in view of Habecker et al. (U.S. Patent No. 6,375,704, now Habecker '704) and WO00/15555.

The differences between the claims and Habecker '066 are that Habecker '066 does not specifically teach the amount of nitrogen in the powder and the material of another part electrode.

Habecker '704 disclose nitrogen in the amount of at least 100 ppm can be present in niobium powder to improve the capacitance of the anode formed from niobium powder containing nitrogen, col. 4, lines 60-65. Thus it would have been obvious to dope the niobium powder taught by Habecker '066 with the amount of nitrogen as taught by Habecker '704 for the noted improvement.

As for the another part of the electrode recited in claims 26-27, WO00/1555 teaches in the same field of endeavor discloses the another part of the electrode can be made from material as recited by the claims, see page 10, line 21 to page 11, line 8. Note that references US 4,805,074 and US 5,412,533, which were incorporated in their entirety in the reference disclose the limitation of capacitor having the

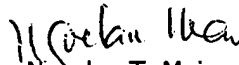
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claimed organic semiconductor. Since WO00/1555 disclose the claimed material for the other part of the electrode conventionally known in the same field of endeavor or the analogous metallurgical art for making capacitor. Therefore, combining known ingredient having known functions, to provide a composition having the additive effect of each of the known functions is within realm of performance of ordinary skill artisan. In re Castner, 186 USPQ 2 13 (2 I 7). The use of conventional materials to perform their known functions in a conventional process is obvious. In re Raner, 134 USPQ 343 (CCPA 1962).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoclan T. Mai whose telephone number is (571) 272-1246. The examiner can normally be reached on 9:30-6:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ngoclan T. Mai  
Primary Examiner  
Art Unit 1742

n.m.